

RESEARCH AND DEVELOPMENT, NEUCHATEL - QUARTERLY REPORT

DIVISION : PROCESS DEVELOPMENT

SUBJECT TITLE : PICASSO

PERIOD COVERED : OCTOBER - DECEMBER 1988

WRITTEN BY : Lüthi-N. (NIL)

KEYWORDS : picasso, tmci, recon, tobacco, sheet, rcb,
monique, es, ch, trial, tarragona, asta,
hosokawa, micropul, db, grinding

OBJECTIVES

=====

The aim of this project is to create an in-house capability for TMCI, a reconstituted tobacco process using a different slurry system to that of RCB, as requested by TTG Richmond. The RCB/Monique sheet line in Onnens appeared suitable for attaining this objective. The project was implemented and now allows for process and product development trials and production of sheet materials using TMCI technology with various binder systems for limited periods of time.

It also involves our assistance, together with PM Richmond, to Tabacalera SA in Spain for sheet development and the start-up of TMCI installations in Tarragona and Cadiz using the PM binder system.

STATUS

=====

As reported earlier, about 5'000 kg of Swiss tobacco feedstock was shipped in August 1988 to Hosokawa Micropul in Germany to be finely ground to two different sizes (1).

The ground material was back in Onnens at the beginning of October. Sieve analyses of the ground products showed quite similar values for both sizes (2, 3). Instead of having a product with 70% smaller than 400 mesh (mean particle size, MPS, about 40 u) and one with only 30% smaller than 400 mesh (MPS about 60 u), we had two products with an MPS of about 35 u and 40 u. This was related to big problems encountered during the grinding, possibly due to a relatively high OV content above 10% of the tobacco material. There was no equipment available to dry the material down to 4 - 5% OV prior to grinding.

Both sizes were used during a three week trial program in November 1988 on the RCB/Monique-TMCI installation in Onnens (4). In general, three different types of trial were carried out during this period, each time using finely ground products :

2028635359

RESEARCH AND DEVELOPMENT, NEUCHÂTEL - QUARTERLY REPORT

- RCB/Monique : using the normal RCB processing steps such as batch slurry mixing, aging, refining, drying, etc.
- TMCI/RCB : slurry preparation with the high shear mixer but slurry application by means of the RCB reverse roll coater
- TMCI/ASTA : slurry preparation with the high shear mixer and slurry application by means of the casting box.

In addition, several conditions were tried for each type of trial by varying parameters such as dryer oil temperature, total solids, sheet weight, etc.

On the whole the trials were quite successful and, in spite of some weak points still existing on the installation, we were able to produce sheets of a much superior quality to those produced in 1987 using the same conditions. This means that the positive results obtained in Tarragona, Spain, when using finely ground material, were confirmed.

Samples of the sheets produced, together with data of the processing conditions, were sent to R&D Richmond for information. The analytical follow-up is under way and a special report will be issued by the undersigned.

TMCI Spain

In December 1988, trials were run in Tarragona, Spain, to confirm that the mechanical modifications made by TMCI had successfully eliminated the problems encountered during the trials in May 1988.


Satisfactory sheets were produced and a two week trial program is now planned for January 1989 to optimize the tobacco particle size (5).

REFERENCES

=====

- (1) Lüthi-N., Quarterly Report, July-September 1988, p. 52
- (2) Lüthi-N., Fax to Gellatly-G., "Project PICASSO, tobacco dust samples", October 25, 1988
- (3) Gellatly-G., Fax to Lüthi-N., "Sieve analysis", November 1, 1988
- (4) Lüthi-N., Memo to distribution, "Essais TMCI à Onnens", November 4, 1988
- (5) Gellatly-G., Note to Alonso-H., "Process evaluation weekly summary on ASTA reconstituted tobacco", December 20, 1988

NIL/cav/January 5, 1989
qr488picanil



2028635360